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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,474	03/30/2001	David Windsor Rillie	1128.014	5743

7590 12/02/2003

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EXAMINER

NGUYEN, CHI Q

ART UNIT	PAPER NUMBER
3635	

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,474

Applicant(s)

RILLIE, DAVID WINDSOR

Examiner

Chi Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,23-26,33-35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18,23-26,33-35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 33, 34, 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,339,900) in view of Bixby (US 5,546,712).

With regard to claims 1, 7, 8, 11, Freeman teaches a skylight structure 17 comprising at least one skylight shaft 19 defining at least one segment bounded by opposed ends, inner metal foil (e.g. aluminum) serves as layer of reflective film on inside 23 (col. 1, lines 46-47), at least one surface irregularity (fig. 3) formed in along with the metal foil, and the tube is 19 is non-transparent because outer layer 21 of the tube is made by metallic layer and between the two layers 21, 23 having a helically coiled spring wire 25 (col. 1, lines 45-50). Freeman does not teach specifically the segment having an axially straight outer surface. The examiner considers this would not appear critical to the function of the invention because the tube 19 would capable performed a similar function as the tube with straight outer surface such as reflecting a light throughout inside the tube. And Freeman does not teach expressly at least one layer of adhesive holding film to hold the layer of irregularity. Bixby teaches an apparatus for skylight comprising a tubular body 40 a reflective material adhered to the body (col. 4, lines 23-27). At the time of the invention, it would have been obvious to a

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person of ordinary skill in the art to combine Freeman with Bixby's teaching the reflective material is adhered to the tube. The motivation for doing so would have been to provide the reflective material a stronger bonding to the tube. In regard to claims 2, 3, 12, 13, Freeman teaches a means or skylight dome 32 is transparent or translucent acrylic therefore the light will pass through the skylight shaft and covering a top end of the shaft 19, a means or diffuser plate 55 for diffusing light. In regard claim 4, Freeman and Bixby do not teach the film includes plural layers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to put more than one layer of the reflective film onto the tube. The motivation for doing so would have been to provide thicker reflective film layer thus preventing the sunlight heat peel off easily. In regard to claims 6, 9, 33, 34, Freeman teaches the irregularity form a pattern (fig. 1) and without forming a pattern (fig. 4), and the irregularity forming longitudinal grooves. With regard to claim 10, Freeman shows in fig. 3 the irregularity having angles, which respect to the long axis of the shaft 19; However, Freeman does not specifically teach the first angle being more acute than the second angle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust one angle differ from the other, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ (CCPA 1954). The motivation for doing so would have been to provide the reflection in different angles. In regard to claim 5, Freeman and Bixby teach the structural elements for the skylight tube as stated except for the film is greater than fifty

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percent specularly reflective, the examiner considers this would have been obvious design choice based on desired use.

Claims 14-18, 23-26, 35, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,339,900) in view of Bixby (US 5,546,712) and further in view of Knudson (US 4,505,143).

With regard to method claims 14, 18, 23, 35, 37, Freeman and Bixby teach the structural elements for the skylight tube as stated except for the method of forming a skylight tube, the examiner considers this to be the obvious method of setting of the device because in forming a reflective skylight tube, one must obviously fabricate a shaft, adhere an adhesion on the shaft, bond the irregularity layer on the adhesion layer, install a transparent cover and diffuser plate as taught by Freeman and Bixby.

With regard to claims 15-17, 24, 25, and 26, Freeman, Bixby teach the structural elements for the skylight tube as stated except for the method of forming surface irregularity by rollers or by press. Knudson teaches irregularity forming by two rollers 67, 65 to make the irregularity surface 57 (cols. 5-6). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Freeman, Bixby with Knudson for method of forming irregularity by using pressing of two rollers 67, 65. The motivation for doing so would have been to provide quicker forming irregularity.

Response to Arguments

Applicant's arguments with respect to claims 1-18, 23-26, 33-35, and 37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Chi Q. Nguyen whose telephone number is (703) 605-1224, Mon-Thu (7:00-5:30), Fridays off or examiner's supervisor, Carl Friedman can be reached at (703) 308-0839. The fax number for the organization where this application or proceeding assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



CQN
11/26/03



Carl D. Friedman
Supervisory Patent Examiner
Group 3600